

ments may be made without departing from the spirit and scope of the invention. Accordingly, the invention is not to be limited except as by the appended claims.

What is claimed is:

- 5 1. A method of processing symbolic representations of dates stored in a database, comprising the steps of
  - providing a database with symbolic representations of dates stored therein according to a format wherein  $M_1M_2$  is the numerical month designator,  $D_1D_2$  is the numerical day designator, and  $Y_1Y_2$  is the numerical year designator, all of the symbolic representations of dates falling within a 10-decade period of time;
  - selecting a 10-decade window with a  $Y_A Y_B$  value for the first decade of the window,  $Y_A Y_B$  being no later than the earliest  $Y_1 Y_2$  year designator in the database;
  - 15 determining a century designator  $C_1 C_2$  for each symbolic representation of a date in the database,  $C_1 C_2$  having a first value if  $Y_1 Y_2$  is less than  $Y_A Y_B$  and having a second value if  $Y_1 Y_2$  is equal to or greater than  $Y_A Y_B$ ; and
  - reformatting the symbolic representation of the date with the values  $C_1 C_2$ ,  $Y_1 Y_2$ ,  $M_1 M_2$ , and  $D_1 D_2$  to facilitate further processing of the dates.
- 25 2. The method of claim 1, wherein the 10-decade window includes the decade beginning in the year 2000.
3. The method of claim 2, wherein the step of determining includes the step of
  - determining the first value as 20 and the second value as 19.
- 30 4. The method of claim 1, including an additional step, after the step of reformatting, of
  - sorting the symbolic representations of dates.
5. The method of claim 1, wherein the step of reformatting
  - 35 includes the step of
    - reformatting each symbolic representation of a date into the format  $C_1 C_2 Y_1 Y_2 M_1 M_2 D_1 D_2$ .
6. The method of claim 5, including an additional step, after the step of reformatting, of
  - 40 sorting the symbolic representations of dates using a numerical-order sort.
7. The method of claim 1, wherein the step of providing a database includes the step of
  - 45 converting pre-existing date information having a different format into the format wherein  $M_1 M_2$  is the numerical month designator,  $D_1 D_2$  is the numerical day designator and  $Y_1 Y_2$  is the numerical year designator.
8. The method of claim 1, wherein the step of selecting
  - 50 includes the step of
    - selecting  $Y_A Y_B$  such that  $Y_B$  is 0 (zero).
9. The method of claim 1, including an additional step, after the step of reformatting, of
  - storing the symbolic representation of dates and their associated information back into the database.
- 55 10. The method of claim 9, including the additional step, after the step of reformatting, of
  - manipulating information in the database having the reformatted date information therein.
- 60 11. A method of processing dates in a database, comprising the steps of
  - providing a database with dates stored therein according to a format wherein  $M_1 M_2$  is the numerical month designator,  $D_1 D_2$  is the numerical day designator, and  $Y_1 Y_2$  is the numerical year designator, all of dates
    - 65 falling within a 10-decade period of time which includes the decade beginning in the year 2000;

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selecting a 10-decade window with a  $Y_A Y_B$  value for the first decade of the window,  $Y_A Y_B$  being no later than the earliest  $Y_1 Y_2$  year designator in the database;

determining a century designator  $C_1 C_2$  for each date in the database,  $C_1 C_2$  having a first value if  $Y_1 Y_2$  is less than  $Y_A Y_B$  and having a second value if  $Y_1 Y_2$  is equal to or greater than  $Y_A Y_B$ ;

reformatting each date in the form  $C_1 C_2 Y_1 Y_2 M_1 M_2 D_1 D_2$  to facilitate further processing of the dates; and

sorting the dates in the form  $C_1 C_2 Y_1 Y_2 M_1 M_2 D_1 D_2$ .

12. The method of claim 11, wherein the step of providing a database includes the step of

converting pre-existing date information having a different format into the format wherein  $M_1 M_2$  is the numeri-

cal month designator,  $D_1D_2$  is the numerical day designator and  $Y_1Y_2$  is the numerical year designator.

13. The method of claim 11, wherein the step of selecting includes the step of

5 selecting  $Y_A Y_B$  such that  $Y_B$  is 0 (zero).

14. The method of claim 11, including an additional step, after the step of sorting, of storing the sorted dates and their associated information back into the database.

10 15. The method of claim 14, including the additional step, after the step of sorting, of manipulating information in the database having the reformatted date therein.

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16. (New) A method of processing symbolic  
representations of dates stored in a database,  
comprising the steps of:

- 5     providing a database with symbolic representations of  
dates stored therein according to a format wherein  $M_1$   
 $M_2$  is the numerical month designator,  $D_1$   $D_2$  is the  
numerical day designator, and  $Y_1$   $Y_2$  is the numerical  
year designator, all of the symbolic representations
- 10    of dates falling within a 10-decade period of time;  
selecting a window with a  $Y_A$   $Y_B$  value for a pivot  
date of the window,  $Y_A$   $Y_B$  being no later than the  
earliest  $Y_1$   $Y_2$  year designator in the database;
- 15    determining a century designator  $C_1$   $C_2$  for each  
symbolic representation of a date in the database,  $C_1$   
 $C_2$  having a first value if  $Y_1$   $Y_2$  is less than  $Y_A$   $Y_B$   
and having a second value if  $Y_1$   $Y_2$  is equal to or  
greater than  $Y_A$   $Y_B$  ; and
- 20    reformatting the symbolic representation of each  
symbolic representation of a date in the database,  
without the addition of any new data field to the  
database, with the reformatted symbolic  
representation of each date in the database having  
the values  $C_1$   $C_2$ ,  $Y_1$   $Y_2$ ,  $M_1$   $M_2$ , and  $D_1$   $D_2$ , in order to

facilitate collectively further processing the  
reformatted symbolic representations of each of the  
symbolic representations of each of the dates.

17. (New) The method of claim 16, wherein the window  
5 includes at least a portion of the decade beginning in  
the year 2000.

18. (New) The method of claim 17, wherein the step of  
determining includes the step of:  
10 determining the first value as 20 and the second  
value as 19.

19. (New) The method of claim 16, including an  
additional step, after the step of reformatting, of:  
sorting the symbolic representations of dates.

20. (New) The method of claim 16, wherein the step of  
15 reformatting includes the step of:  
reformatting each symbolic representation of a date  
into the format C<sub>1</sub> C<sub>2</sub> Y<sub>1</sub> Y<sub>2</sub> M<sub>1</sub> M<sub>2</sub> D<sub>1</sub> D<sub>2</sub> separately from  
the symbolic representations in the database.

21. (New) The method of claim 20, including an  
20 additional step, after the step of reformatting, of:  
sorting the symbolic representations of dates using a  
numerical-order sort.

22. (New) The method of claim 16, wherein the step of  
providing a database includes the step of:

5 converting pre-existing date information having a  
different format into the format wherein M<sub>1</sub> M<sub>2</sub> is the  
numerical month designator, D<sub>1</sub> D<sub>2</sub> is the numerical  
day designator and Y<sub>1</sub> Y<sub>2</sub> is the numerical year  
designator.

23. (New) The method of claim 16, wherein the step of  
selecting includes the step of:

10 selecting Y<sub>A</sub> Y<sub>B</sub> such that Y<sub>B</sub> is 0 (zero).

24. (New) The method of claim 16, including an  
additional step, after the step of reformatting, of:

storing the symbolic representation of dates and  
their associated information back into the database.

15 25. (New) The method of claim 24, including the  
additional step, after the step of reformatting, of:

manipulating information in the database having the  
reformatted date information therein.

20 26. (New) A method of processing dates in a database,  
comprising the steps of:

providing a database with dates stored therein  
according to a format wherein M<sub>1</sub> M<sub>2</sub> is the numerical  
month designator, D<sub>1</sub> D<sub>2</sub> is the numerical day

designator, and  $Y_1 Y_2$  is the numerical year  
designator, all of the symbolic representations of  
dates falling within a 10-decade period of time;  
selecting a window with a  $Y_A Y_B$  value for a pivot  
5 date of the window,  $Y_A Y_B$  being no later than the  
earliest  $Y_1 Y_2$  year designator in the database;  
determining a century designator  $C_1 C_2$  for each date  
in the database,  $C_1 C_2$  having a first value if  $Y_1 Y_2$   
is less than  $Y_A Y_B$  and having a second value if  $Y_1 Y_2$   
10 is equal to or greater than  $Y_A Y_B$  ;  
reformatting the symbolic representation of each  
symbolic representation of a date in the database,  
without the addition of any new data field to the  
database, with the reformatted symbolic  
15 representation of each date in the database having  
the values  $C_1 C_2$ ,  $Y_1 Y_2$ ,  $M_1 M_2$  , and  $D_1 D_2$ , in order to  
facilitate collectively further processing the  
reformatted symbolic representations of each of the  
symbolic representations of each of the dates; and  
20 sorting the dates in the form  $C_1 C_2 Y_1 Y_2 M_1 M_2 D_1 D_2$ .  
27. (New) The method of claim 26, wherein the step of  
providing a database includes the step of:  
converting pre-existing date information having a  
different format into the format wherein  $M_1 M_2$  is the

numerical month designator,  $D_1$   $D_2$  is the numerical  
day designator and  $Y_1$   $Y_2$  is the numerical year  
designator.

28. (New) The method of claim 26, wherein the step of  
5 selecting includes the step of:

selecting  $Y_A$   $Y_B$  such that  $Y_B$  is 0 (zero).

29. (New) The method of claim 26, including an  
additional step, after the step of sorting, of:  
10 storing the sorted dates and their associated  
information back into the database.

30. (New) The method of claim 29, including the  
additional step, after the step of sorting, of:  
manipulating information in the database having the  
reformatted dates therein.

15 31. (New) A method of processing symbolic  
representations of dates stored in a database,  
comprising the steps of:  
providing a database with symbolic representations of  
dates stored therein according to a format wherein  $Y_1$   
20  $Y_2$  is the numerical year designator;  
selecting a window with a  $Y_A$   $Y_B$  value for the first  
decade of the window,  $Y_A$   $Y_B$  being no later than the  
earliest  $Y_1$   $Y_2$  year designator in the database;



determining a century designator  $C_1$   $C_2$  for each  
symbolic representation of a date in the database,  $C_1$   
 $C_2$  having a first value if  $Y_1$   $Y_2$  is less than  $Y_A$   $Y_B$   
and having a second value if  $Y_1$   $Y_2$  is equal to or  
5 greater than  $Y_A$   $Y_B$  ; and

reformatting the symbolic representation of each  
symbolic representation of a date in the database,  
without the addition of any new data field to the  
database, with the reformatted symbolic  
10 representation of each date in the database having  
the values  $C_1$   $C_2$ ,  $Y_1$   $Y_2$ , in order to facilitate  
collectively further processing the reformatted  
symbolic representations of each of the symbolic  
representations of each of the dates.

15 32. (New) A method of processing dates in a database,  
comprising the steps of:

providing a database with symbolic representations of  
dates stored therein according to a format wherein  $Y_1$   
 $Y_2$  is the numerical year designator;  
20 selecting a window with a  $Y_A$   $Y_B$  value for a pivot  
year of the window,  $Y_A$   $Y_B$  being no later than the  
earliest  $Y_1$   $Y_2$  year designator in the database;  
determining a century designator  $C_1$   $C_2$  for each  
symbolic representation of a date in the database,  $C_1$

C<sub>2</sub> having a first value if Y<sub>1</sub> Y<sub>2</sub> is less than Y<sub>A</sub> Y<sub>B</sub>  
and having a second value if Y<sub>1</sub> Y<sub>2</sub> is equal to or  
greater than Y<sub>A</sub> Y<sub>B</sub> ;

5 reformatting the symbolic representation of each of  
the dates in the database, without the addition of  
any new data field to the database, with the  
reformatted symbolic representation of each date in  
the database having the values C<sub>1</sub> C<sub>2</sub>, Y<sub>1</sub> Y<sub>2</sub>, in order  
to facilitate collectively further processing the  
10 reformatted symbolic representations of each of the  
dates; and

sorting the dates in the form C<sub>1</sub> C<sub>2</sub> Y<sub>1</sub> Y<sub>2</sub>.

33. (New) A method of processing symbolic  
representations of dates stored in a database,  
15 comprising the steps of:  
providing a database with symbolic representations of  
dates stored therein according to a format wherein Y<sub>1</sub>  
Y<sub>2</sub> is the numerical year designator;

selecting a window with a Y<sub>A</sub> Y<sub>B</sub> value for the first  
20 decade of the window, Y<sub>A</sub> Y<sub>B</sub> being no later than the  
earliest Y<sub>1</sub> Y<sub>2</sub> year designator in the database;  
determining a century designator C<sub>1</sub> C<sub>2</sub> for each  
symbolic representation of a date in the database, C<sub>1</sub>  
C<sub>2</sub> having a first value if Y<sub>1</sub> Y<sub>2</sub> is less than Y<sub>A</sub> Y<sub>B</sub>

and having a second value if  $Y_1 Y_2$  is equal to or  
greater than  $Y_A Y_B$  ; and

reformatting the symbolic representation of each  
symbolic representation of a date in the database,  
5 without changing any of the symbolic representations  
of a date in the database during the reformatting  
step, with the reformatted symbolic representation of  
each date in the database having the values  $C_1 C_2, Y_1$   
 $Y_2$ , in order to facilitate collectively further  
10 processing the reformatted symbolic representations  
of each of the dates.

34. (New) A method for representing and utilizing dates  
stored in at least one date field of a database  
utilizing symbolic representations of the dates stored  
15 in the at least one date field of the database, which  
are in a format that creates ambiguity between dates in  
each of a pair of adjacent centuries, comprising the  
steps of:

converting each of the symbolic representations of  
20 dates stored in the at least one date field of the  
database to a symbolic representation of each of the  
respective dates that does not create the ambiguity,  
by windowing the symbolic representations of each of  
the respective dates as stored in the at least one  
25 date field of the database against a pivot year

represented by one of the symbolic representations of  
the dates as stored in the at least one date field of  
the database, without the addition of any new data  
field to the database for purposes of such windowing  
5 and converting; and,

running a program collectively on each of the  
converted symbolic representations of each of the  
respective dates to sort or otherwise manipulate the  
dates represented by the converted symbolic  
10 representations, separately from the date data  
symbolic representations contained in the at least  
one date field of the database.

35. (New) A method of claim 34 further comprising the  
step of:

15 opening the database prior to the step of  
converting.

36. (New) The method of claim 34 further comprising  
the step of:

20 collectively sorting the converted symbolic  
representations prior to the step of running the  
program on the converted symbolic representations.

37. (New) The method of claim 35 further comprising  
25 the step of:

collectively sorting the converted symbolic representations prior to the step of running the program on the converted symbolic representations.

- 5 38. (New) The method of claim 34 further comprising  
the step of:

collectively manipulating the converted symbolic representations prior to the step of running the program on the converted symbolic representations.

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39. (New) The method of claim 35 further comprising  
the step of:

collectively manipulating the converted symbolic representations prior to the step of running the program on the converted symbolic representations.

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40. (New) The method of claim 34 further comprising  
the step of:

collectively sorting the converted symbolic representations according to a different data field contained in the database from the at least one date field, prior to the step of running the program on the converted symbolic representations.

20

41. (New) The method of claim 35 further comprising  
the step of:

collectively sorting the converted symbolic  
representations according to a different data field  
5 contained in the database from the at least one date  
field, prior to the step of running the program on the  
converted symbolic representations

42. (New) The method of claim 34 further comprising  
the step of:

collectively manipulating the converted symbolic  
representations according to a different data field  
contained in the database from the at least one date  
field, prior to the step of running the program on the  
15 converted symbolic representations.

43. (New) The method of claim 35 further comprising  
the step of:

collectively manipulating the converted symbolic  
20 representations according to a different data entry  
field contained in the database from the at least one  
date field, prior to the step of running the program on  
the converted symbolic representations.

44. (New) The method of claim 34 wherein the program  
performs an operation which manipulates the data in a  
data field associated with the at least one date field  
of the database according to the converted symbolic  
5 representation of the date.

45. (New) The method of claim 35 wherein the program  
performs an operation which manipulates the data in a  
data field associated with the at least one date field  
10 of the database according to the converted symbolic  
representation of the date.

46. (New) The method of claim 34 wherein the step of  
converting includes converting at least a substantial  
15 portion of each of the plurality of symbolic  
representations of dates in the at least one date field  
and repeating this step until each of the date data  
entries in the at least one date field is converted  
into the format that does not have the ambiguity.

47. (New) The method of claim 35 wherein the step of  
converting includes converting at least a substantial  
portion of each of the plurality of symbolic  
representations of dates in the at least one date field  
25 and repeating this step until each of the date data

entries in the at least one date field is converted  
into the format that does not have the ambiguity.

48. (New) The method of claim 46 further comprising  
5 the steps of:

collectively sorting the converted symbolic  
representations prior to the step of running the  
program on the converted symbolic representations.

10 49. (New) The method of claim 47 further comprising  
the steps of:

collectively sorting the converted symbolic  
representations prior to the step of running the  
program on the converted symbolic representations.

15 50. (New) The method of claim 46 further comprising  
the step of:

collectively manipulating the converted symbolic  
representations.

20 51. (New) The method of claim 49 further comprising  
the step of:

collectively manipulating the converted symbolic  
representations.

25



52. (New) The method of claim 46 further comprising  
the step of:

collectively sorting the converted symbolic  
representations according to a different data field in  
5 the database than the at least one date field, prior to  
the step of running the program.

53. (New) The method of claim 47 further comprising  
the step of:

10 collectively sorting the converted symbolic  
representations according to a different data field in  
the database than the at least one date field, prior to  
the step of running the program.

15 54. (New) The method of claim 52 further comprising  
the step of:

collectively manipulating the converted symbolic.

55. (New) The method of claim 53 further comprising  
20 the step of:

collectively manipulating the converted symbolic  
representations.

56. (New) The method of claim 52 wherein the program  
25 performs an operation which manipulates the data in a

data field associated with the at least one date field  
of the database according to the converted symbolic  
representation of the date.

5    57. (New) The method of claim 53 wherein the program  
performs an operation which manipulates the data in a  
data field associated with the at least one date field  
of the database according to the converted symbolic  
representation of the date.

10    58. (New) The method of claim 54 wherein the program  
performs an operation which manipulates the data in a  
data field associated with the at least one date field  
of the database according to the converted symbolic  
15    representation of the date.

59. (New) The method of claim 55 wherein the program  
performs an operation which manipulates the data in a  
data field associated with the at least one date field  
20    of the database according to the converted symbolic  
representation of the date.

60. (New) A method for representing and utilizing dates  
stored in at least one date field of a database  
25    utilizing symbolic representations of the dates stored

in the at least one date field of the database, which  
are in a format that creates ambiguity between dates in  
each of a pair of adjacent centuries, comprising the  
steps of:

- 5     converting each of the symbolic representations of  
      dates stored in the at least one date field of the  
      database to a symbolic representation of each of the  
      respective dates that does not create the ambiguity,  
      by windowing the symbolic representations of each of  
10    the respective dates as stored in the at least one  
      date field of the database against a pivot year  
      represented by one of the symbolic representations of  
      the dates as stored in the at least one date field of  
      the database, without modifying any of the symbolic  
15    representations of dates in the at least one date  
      field of the database for purposes of such windowing  
      and converting;  
      running a program on each of the converted symbolic  
      representations of each of the respective dates to  
20    sort or otherwise manipulate data in the database  
      according to the dates represented by the converted  
      symbolic representations, separately from the date  
      data symbolic representations of dates contained in  
      the at least one date field of the database.

61. (New) A method for representing and utilizing dates  
stored in at least one date field of a database  
utilizing symbolic representations of the dates stored  
in the at least one date field of the database, which  
5 are in a format that creates ambiguity between dates in  
each of a pair of adjacent centuries, comprising the  
steps of:

converting each of the symbolic representations of  
dates stored in the at least one date field of the  
10 database to a symbolic representation of each of the  
respective dates that does not create the ambiguity,  
by windowing the symbolic representations of each of  
the respective dates as stored in the at least one  
date field of the database against a pivot year  
15 represented by one of the symbolic representations of  
the dates as stored in the at least one date field of  
the database, without modifying any of the symbolic  
representations of dates in the at least date field  
of the database for purposes of such windowing and  
20 converting;

running a program collectively on each of the  
converted symbolic representations of each of the  
respective dates to sort or otherwise manipulate the  
dates represented by the converted symbolic  
25 representations, separately from the symbolic

representations of dates contained in the at least  
one date field of the database.

62. (New) A method for representing and utilizing dates  
stored in at least one date field of a database  
5 utilizing symbolic representations of the dates stored  
in the at least one date field of the database, which  
are in a format that creates ambiguity between dates in  
each of a pair of adjacent centuries, comprising the  
steps of:
- 10 converting each of the symbolic representations of  
dates stored in the at least one date field of the  
database to a symbolic representation of each of the  
respective dates that does not create the ambiguity,  
by windowing the symbolic representations of each of  
15 the respective dates as stored in the at least one  
date field of the database against a pivot year  
represented by one of the symbolic representations of  
the dates as stored in the at least one date field of  
the database, without the addition of any new data  
20 field to the database for purposes of such windowing  
and converting;
- storing the converted symbolic representations  
separate from the at least one date field of the  
database; and

running a program on the stored converted symbolic  
representations to sort or otherwise manipulate data  
in the database according to the dates represented by  
the converted symbolic representations, separately  
5 from the symbolic representations of dates contained  
in the at least one date field of the database.

63. (New) A method for representing and utilizing dates  
stored in at least one date field of a database  
utilizing symbolic representations of the dates stored  
10 in the at least one date field of the database, which  
are in a format that creates ambiguity between dates in  
each of a pair of adjacent centuries, comprising the  
steps of:

converting each of the symbolic representations of  
15 dates stored in the at least one date field of the  
database to a symbolic representation of each of the  
respective dates that does not create the ambiguity,  
by windowing the symbolic representations of each of  
the respective dates as stored in the at least one  
20 date field of the database against a pivot year  
represented by one of the symbolic representations of  
the dates as stored in the at least one date field of  
the database, without the addition of any new data  
field to the database for purposes of such windowing  
25 and converting;

storing the converted symbolic representations  
separate from the at least one date field of the  
database; and

running a program collectively on the stored  
5 converted symbolic representations to sort or  
otherwise manipulate the dates represented by the  
converted symbolic representations, separately from  
the symbolic representations of dates contained in  
the at least one date field of the database.

10 64. (New) A method for representing and utilizing dates  
stored in at least one date field of a database  
utilizing symbolic representations of the dates stored  
in the at least one date field of the database, which  
15 are in a format that creates ambiguity between dates in  
each of a pair of adjacent centuries, comprising the  
steps of:

converting each of the symbolic representations of  
dates stored in the at least one date field of the  
20 database to a symbolic representation of each of the  
respective dates that does not create the ambiguity,  
by windowing the symbolic representations of each of  
the respective dates as stored in the at least one  
date field of the database against a pivot year  
25 represented by one of the symbolic representations of

the dates as stored in the at least one date field of  
the database, without modifying any of the symbolic  
representations of dates in the at least one date  
field of the database for purposes of such windowing  
5 and converting;

storing the converted symbolic representations  
separate from the at least one date field in the  
database; and  
running a program on the stored converted symbolic  
10 representations to sort or otherwise manipulate data  
in the database according to the dates represented by  
the converted symbolic representations, separately  
from the symbolic representations of dates contained  
in the at least one date field of the database.

65. (New) A method for representing and utilizing dates  
stored in at least one date field of a database  
utilizing symbolic representations of the dates stored  
in the at least one date field of the database, which  
are in a format that creates ambiguity between dates in  
15 each of a pair of adjacent centuries, comprising the  
steps of:

converting each of the symbolic representations of  
dates stored in the at least one date field of the  
database to a symbolic representation of each of the  
25 respective dates that does not create the ambiguity,



- by windowing the symbolic representations of each of the respective dates as stored in the at least one date field of the database against a pivot year represented by one of the symbolic representations of the dates as stored in the at least one date field of the database, without modifying any of the symbolic representations of dates in the at least one date field of the database for purposes of such windowing and converting;
- storing the converted symbolic representations separate from the at least one date field in the database; and
- running a program collectively on the stored converted symbolic representations to sort or otherwise manipulate the dates represented by the converted symbolic representations, separately from the symbolic representations of dates contained in the at least one date field of the database.
66. (New) A method of processing dates in a database, comprising the steps of:
- providing a database with dates stored in at least one date field therein according to a format wherein  $M_1 M_2$  is the numerical month designator,  $D_1 D_2$  is the

numerical day designator, and  $Y_1 Y_2$  is the numerical  
year designator;

selecting a window with a  $Y_A Y_B$  value for a pivot  
date of the window,  $Y_A Y_B$  being no later than the  
5 earliest  $Y_1 Y_2$  year designator in the database;

determining a century designator  $C_1 C_2$  for each date  
in the database,  $C_1 C_2$  having a first value if  $Y_1 Y_2$   
is less than  $Y_A Y_B$  and having a second value if  $Y_1 Y_2$   
is equal to or greater than  $Y_A Y_B$ ;

10 reformatting the symbolic representation of each  
symbolic representation of a date in a portion of the  
at least one date field in the database, without the  
addition of any new data field to the database, with  
the reformatted symbolic representation of each date  
15 in the database having the values  $C_1 C_2, Y_1 Y_2, M_1 M_2,$   
and  $D_1 D_2$ ; and

repeating the step of reformatting until each  
symbolic representation of a date in the at least one  
date field has been reformatted in order to  
20 facilitate collectively further processing the  
reformatted symbolic representations of each of the  
symbolic representations of each of the dates.

67. (New) A method of processing dates in a database,  
comprising the steps of:

providing a database with dates stored in at least  
one date field therein according to a format wherein  
 $Y_1 Y_2$  is the numerical year designator;

5 selecting a window with a  $Y_A Y_B$  value for a pivot  
date of the window,  $Y_A Y_B$  being no later than the  
earliest  $Y_1 Y_2$  year designator in the database;

determining a century designator  $C_1 C_2$  for each date  
in the database,  $C_1 C_2$  having a first value if  $Y_1 Y_2$   
is less than  $Y_A Y_B$  and having a second value if  $Y_1 Y_2$   
10 is equal to or greater than  $Y_A Y_B$ ;

reformatting the symbolic representation of each  
symbolic representation of a date in a portion of the  
at least one date field in the database, without the  
addition of any new data field to the database, with  
15 the reformatted symbolic representation of each date  
in the database having the values  $C_1 C_2, Y_1 Y_2$ ; and

repeating the step of reformatting until each  
symbolic representation of a date in the at least one  
date field has been reformatted in order to  
20 facilitate collectively further processing the  
reformatted symbolic representations of each of the  
symbolic representations of each of the dates.

68. (New) A method of processing symbolic  
representations of dates stored in a database,  
comprising the steps of:

5 providing a database with symbolic representations of  
dates stored in at least one date field therein  
according to a format wherein  $Y_1 Y_2$  is the numerical  
year designator;

10 selecting a window with a  $Y_A Y_B$  value for the first  
decade of the window,  $Y_A Y_B$  being no later than the  
earliest  $Y_1 Y_2$  year designator in the at least one  
date field of the database;

15 determining a century designator  $C_1 C_2$  for each  
symbolic representation of a date in the database,  $C_1$   
 $C_2$  having a first value if  $Y_1 Y_2$  is less than  $Y_A Y_B$   
and having a second value if  $Y_1 Y_2$  is equal to or  
greater than  $Y_A Y_B$  ; and

20 reformatting the symbolic representation of each  
symbolic representation of a date in at least one  
date field in the database, without the addition of  
any new data field to the database, with the  
reformatted symbolic representation of each date in  
the database having the values  $C_1 C_2, Y_1 Y_2$ , in order  
to facilitate further processing of the reformatted  
symbolic representations of each of the symbolic

representations of each of the dates, by running a  
program on the reformatted symbolic representations  
of each of the dates.

69. (New) A method of processing dates in a database,  
5 comprising the steps of:

providing a database with dates stored in at least  
one date field therein according to a format wherein  
Y<sub>1</sub> Y<sub>2</sub> is the numerical year designator;

10 selecting a window with a Y<sub>A</sub> Y<sub>B</sub> value for a pivot  
year of the window, Y<sub>A</sub> Y<sub>B</sub> being no later than the  
earliest Y<sub>1</sub> Y<sub>2</sub> year designator in the database;

determining a century designator C<sub>1</sub> C<sub>2</sub> for each date  
in the at least one date field of the database, C<sub>1</sub> C<sub>2</sub>  
having a first value if Y<sub>1</sub> Y<sub>2</sub> is less than Y<sub>A</sub> Y<sub>B</sub> and  
15 having a second value if Y<sub>1</sub> Y<sub>2</sub> is equal to or greater  
than Y<sub>A</sub> Y<sub>B</sub> ;

reformatting the symbolic representation of each  
symbolic representation of a date in the at least one  
date field in the database, without the addition of  
20 any new data field to the database, with the  
reformatted symbolic representation of each date in  
the database having the values C<sub>1</sub> C<sub>2</sub>, Y<sub>1</sub> Y<sub>2</sub>;

sorting the reformatted symbolic representations of  
the dates in the form C<sub>1</sub> C<sub>2</sub> Y<sub>1</sub> Y<sub>2</sub>; and

running a program on the reformatted symbolic  
representations of each of the dates.

70. (New) A method for representing and utilizing dates  
stored in at least one date field of a database  
utilizing symbolic representations of the dates stored  
in at least one date field of the database, which are  
in a format that creates ambiguity between dates in  
each of a pair of adjacent centuries, comprising the  
steps of

converting each of the symbolic representations of  
dates stored in the at least one date field of the  
database to a symbolic representation of each of the  
respective dates that does not create the ambiguity,  
by windowing the symbolic representations of each of  
the respective dates as stored in the at least one  
date field of the database against a pivot year, with  
the pivot year being less than or equal to the  
earliest date represented by the symbolic  
representation of dates stored in the at least one  
date field, without the addition of any new data  
field to the database, and without modifying any of  
the symbolic representations of dates in the at least  
one date field, for purposes of such windowing and  
converting; and,

running a program on the converted symbolic  
representations of each of the dates to sort or  
otherwise manipulate the dates represented by the  
converted symbolic representations, separately from  
5 the date data symbolic representations contained in  
the at least one date field of the database.

71. (New) A method for representing and utilizing dates  
stored in at least one date field of the database  
utilizing symbolic representations of the dates stored  
10 in the at least one date field of the database, which  
are in a format that creates ambiguity between dates in  
each of a pair of adjacent centuries, comprising the  
steps of

converting each of the symbolic representations of  
15 dates stored in the at least one date field of the  
database to a symbolic representation of each of the  
respective dates that does not create the ambiguity,  
by windowing the symbolic representations of each of  
the respective dates as stored in the at least one  
20 date field of the database against a pivot year, with  
the pivot year being less than or equal to the  
earliest date represented by a symbolic  
representation of dates stored in the at least one  
date field, and without the addition of any new data

field to the database for purposes of such windowing  
and converting;

storing each of the converted symbolic  
representations of each of the dates separate from  
5 the database; and,

running a program on the stored converted symbolic  
representations of each of the converted symbolic  
representations of the dates to sort or otherwise  
manipulate the dates represented by the converted  
10 symbolic representations, separately from the date  
data symbolic representations contained in the at  
least one date field of the database.

72. (New) A method of processing symbolic  
representations of dates stored in a database,

15 comprising the steps of

selecting a database with symbolic representations of  
dates stored therein according to a format wherein  $M_1$   
 $M_2$  is the numerical month designator,  $D_1 D_2$  is the  
numerical day designator, and  $Y_1 Y_2$  is the numerical  
20 year designator;

selecting a 10-decade window with a  $Y_A Y_B$  value for  
the first decade of the window,  $Y_A Y_B$  being no later  
than the earliest  $Y_1 Y_2$  year designator in the  
database;



determining a century designator  $C_1$   $C_2$  for each  
symbolic representation of a date in the database,  $C_1$   
 $C_2$  having a first value if  $Y_1$   $Y_2$  is less than  $Y_A$   $Y_B$   
and having a second value if  $Y_1$   $Y_2$  is equal to or  
5 greater than  $Y_A$   $Y_B$  ; and,

reformatting the symbolic representation of each  
symbolic representation of a date in the database  
with the values  $C_1$   $C_2$ ,  $Y_1$   $Y_2$ ,  $M_1$   $M_2$  , and  $D_1$   $D_2$  prior  
to collectively further processing information  
10 contained within the database associated with the  
respective dates.

73. (New) A method of processing symbolic  
representations of dates stored in a database,  
comprising the steps of

15 providing a database with symbolic representations of  
dates stored therein according to a format wherein  $Y_1$   
 $Y_2$  is the numerical year designator, all of the  
symbolic representations of dates falling within a  
10-decade period of time;

20 selecting a 10-decade window with a  $Y_A$   $Y_B$  value for  
the first decade of the window,  $Y_A$   $Y_B$  being no later  
than the earliest  $Y_1$   $Y_2$  year designator in the  
database;

determining a century designator  $C_1$   $C_2$  for each  
symbolic representation of a date in the database,  $C_1$   
 $C_2$  having a first value if  $Y_1$   $Y_2$  is less than  $Y_A$   $Y_B$   
and having a second value if  $Y_1$   $Y_2$  is equal to or  
5 greater than  $Y_A$   $Y_B$  ; and,

reformatting the symbolic representation of the date  
with the values  $C_1$   $C_2$ ,  $Y_1$   $Y_2$ , to facilitate further  
processing of the dates.

74. (New) A method of processing dates in a database,  
10 comprising the steps of

providing a database with symbolic representations of  
dates stored therein according to a format wherein  $Y_1$   
 $Y_2$  is the numerical year designator, all of symbolic  
representations of dates falling within a 10-decade  
15 period of time;

selecting a 10-decade window with a  $Y_A$   $Y_B$  value for  
the first decade of the window,  $Y_A$   $Y_B$  being no later  
than the earliest  $Y_1$   $Y_2$  year designator in the  
database;

20 determining a century designator  $C_1$   $C_2$  for each date  
in the database,  $C_1$   $C_2$  having a first value if  $Y_1$   $Y_2$   
is less than  $Y_A$   $Y_B$  and having a second value if  $Y_1$   $Y_2$   
is equal to or greater than  $Y_A$   $Y_B$  ;

reformatting each date in the form  $C_1 C_2 Y_1 Y_2$  to  
facilitate further processing of the dates; and,  
sorting the dates in the form  $C_1 C_2 Y_1 Y_2$ .

75. (New) A method of processing symbolic

5 representations of dates stored in a database,  
comprising the steps of

providing a database with symbolic representations of  
dates stored therein according to a format wherein  $M_1$   
 $M_2$  is the numerical month designator,  $D_1 D_2$  is the  
10 numerical day designator, and  $Y_1 Y_2$  is the numerical  
year designator;

selecting a window with a  $Y_A Y_B$  value for a pivot  
date of the window,  $Y_A Y_B$  being no later than the  
earliest  $Y_1 Y_2$  year designator in the database;

15 determining a century designator  $C_1 C_2$  for each  
symbolic representation of a date in the database,  $C_1$   
 $C_2$  having a first value if  $Y_1 Y_2$  is less than  $Y_A Y_B$   
and having a second value if  $Y_1 Y_2$  is equal to or  
greater than  $Y_A Y_B$  ; and

20 reformatting the symbolic representation of each  
symbolic representation of a date in the database,  
without the addition of any new data field to the  
database, with the reformatted symbolic  
representation of each date in the database having

the values C<sub>1</sub> C<sub>2</sub>, Y<sub>1</sub> Y<sub>2</sub>, M<sub>1</sub> M<sub>2</sub>, and D<sub>1</sub> D<sub>2</sub>, in order to  
facilitate further processing of the reformatted  
symbolic representations of each of the symbolic  
representations of each of the dates.

5 76. (New) A method of processing dates in a database,  
comprising the steps of

providing a database with dates stored therein  
according to a format wherein M<sub>1</sub> M<sub>2</sub> is the numerical  
month designator, D<sub>1</sub> D<sub>2</sub> is the numerical day  
10 designator, and Y<sub>1</sub> Y<sub>2</sub> is the numerical year  
designator;

selecting a window with a Y<sub>A</sub> Y<sub>B</sub> value for a pivot  
date of the window, Y<sub>A</sub> Y<sub>B</sub> being no later than the  
earliest Y<sub>1</sub> Y<sub>2</sub> year designator in the database;

15 determining a century designator C<sub>1</sub> C<sub>2</sub> for each date  
in the database, C<sub>1</sub> C<sub>2</sub> having a first value if Y<sub>1</sub> Y<sub>2</sub>  
is less than Y<sub>A</sub> Y<sub>B</sub> and having a second value if Y<sub>1</sub> Y<sub>2</sub>  
is equal to or greater than Y<sub>A</sub> Y<sub>B</sub> ;

reformatting the symbolic representation of each  
20 symbolic representation of a date in the database,  
without the addition of any new data field to the  
database, with the reformatted symbolic  
representation of each date in the database having  
the values C<sub>1</sub> C<sub>2</sub>, Y<sub>1</sub> Y<sub>2</sub>, M<sub>1</sub> M<sub>2</sub> , and D<sub>1</sub> D<sub>2</sub>, in order to

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